

# **Review into the use of total factor productivity for the determination of prices and revenues**

## **Responses to Framework and Issues Paper**

**March 2009**

### **Introduction**

On 12 December 2008 the AEMC released its Framework and Issues Paper (Issues Paper) on the Review into the use of total factor productivity for the determination of prices and revenues (TFP Review). This Issues Paper outlined the AEMC's planned approach and process for the review. It also provided a discussion on TFP matters and invited interested parties to provide written submissions by 27 February 2009.

Submissions were received from the following interested parties:

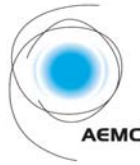
Australian Energy Regulator (AER)  
Dr Keith Watts  
Energex  
Energy Networks Association (ENA)  
EnergyAustralia (EA)  
Envestra  
Ergon Energy (Ergon)  
Essential Services Commission of Victoria (ESC)  
ETSA Utilities-Citipower-Powercor  
Grid Australia  
Integral Energy (Integral)  
Jemena  
SP AusNet  
Total Environment Centre (TEC)  
Victorian Department of Primary Industries (VDPI)

This document has been prepared to provide interested parties with an overview of the submissions listed above. It has also taken into account the presentations made by interested parties at the AEMC's public forum (which was held on 11 February 2009).

This document provides a summary of key points arising from the responses to the AEMC's Issues Paper. It then provides an overview of the responses according to the topics of:

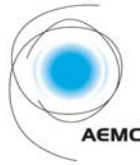
- process for the TFP Review
- assessment against the national objectives
- costs and benefits of TFP compared to building blocks
- necessary conditions for TFP
- TFP design issues
- TFP as a benchmarking technique
- TFP for the transmission sector, and
- implementation and transitional issues.

All submissions and public forum presentations are available from the AEMC's website.



## Summary

- The AEMC should understand and identify the deficiencies with the current building block arrangements before considering changes to the existing framework. The current arrangements should be provided with more time to be put into practice.
- A number of submissions requested that the AEMC consider other alternatives (in addition to TFP) to the current building block approach as part of the review.
- The detailed design issues of a TFP approach could be addressed through greater consultation with interested parties and the use of a working group. A number of interested parties stated that further specification of a TFP approach would assist them in the consideration of the value of TFP for revenue and pricing determinations.
- Some parties supported the use of TFP for the determination of revenues and prices. These are: Victorian Department of Primary Industries (VDPI), Essential Services Commission of Victoria (ESC) and SP AusNet. However, there is considerable doubt that the use of a TFP method would ensure the recovery of efficient costs and appropriate returns for service providers.
- Service providers sought to ensure that any alternative to the building block approach accommodates new policy developments such as climate change and the introduction of 'smart meters'.
- Opinions differ on whether a TFP methodology can (or is necessary to) improve the strength of incentives of service providers. Some parties suggested alternative measures that they considered would achieve similar results to TFP. The question of whether stronger incentives are desirable was also raised.
- Service providers considered that the introduction of a TFP methodology would increase their regulatory costs and that savings that may arise from not using a building block methodology would not be significant. In particular, service providers expressed concern about any additional reporting requirements that may arise.
- Many submissions asserted that the necessary conditions to implement a TFP methodology do not presently exist in the distribution sector. However, VDPI, ESC and SP AusNet did not agree.
- It was claimed that the required necessary conditions for TFP do not exist at all for the transmission sector. In particular, the nature of transmission capital expenditure was not consistent with the use of TFP.
- It was requested that further consultation be undertaken on the details of a TFP approach. Interested parties did note that outputs, inputs, setting  $X$  and setting  $P_0$  were matters that required specification.
- It was acknowledged that using TFP for benchmarking may be beneficial to the AER's regulatory processes. No parties expressed a desire for any amendments to the current benchmarking provisions of the National Electricity Rules (NER) or National Gas Rules (NGR).



## 1. Process for the Review

### Overview:

There was general support for the AEMC's approach to the TFP Review and the release of the Issues Paper and accompanying consultant reports.

A number of interested parties stated that more work should first be carried out on understanding what problems exist with the current building block arrangements. Then, the AEMC could consider how to address the identified deficiencies. This may include TFP but interested parties commented that it may also include other changes or amendments to the current methodology.

In addition to suggesting this broader scope, a number of interested parties also suggested that the TFP Review process include additional consultation. This could be in the form of a 'working group' that includes industry representatives.

### Submission highlights:

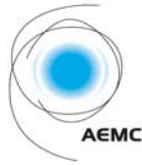
A number of interested parties acknowledged and expressed support for the AEMC's decision to undertake a review of the possible application of TFP for all the energy sectors and the release of the Issues Paper. Interested parties also expressed a desire for the review to be a thorough assessment of TFP in the Australian context.

EnergyAustralia (EA) stated that the issues and problems with the current regulatory framework must be properly identified before committing to development of an alternative regulatory framework. Also, in its view, it is not clear whether TFP is the only viable option of resolving the issues/problems identified with the building block approach. This view and similar ones were also expressed by the Australian Energy Regulator (AER), Jemena, Ergon, Envestra, ETSA-Citipower-Powercor, Energy Users Association (EUAA) and the Australian Pipeline Industry Association (APIA).

The Energy Networks Association (ENA) stated that it is not clear that material deficiencies exist within the building blocks approach that can be remedied through a TFP approach.

Integral Energy (Integral) considered that there is a general lack of clarity regarding the concerns and suggestions that the current building block model that needs to be amended. In its view, it is unclear whether some of the general criticism of building blocks would be as prominent if the recent reforms (in the form of the current laws and rules) were taken into account. For example, there have been reforms relating to the introduction of merits review and the requirements for the AER to fully disclose its reasoning for rejecting proposals based upon the NER criteria. In Integral's view, these changes should help to overcome the problem of subjective decisions within the building block approach. Both Integral and EA consider that the new information regulatory powers should help the AER overcome any information asymmetry and limit the ability of service providers to game the decision making process.

Integral also raised some concerns about the timing of the TFP Review and the process proposed by the AEMC. It questioned the appropriateness of conducting the TFP Review so close to the recent reforms. Integral considered that these reforms should be allowed time to be implemented by the AER and refined (based on the experience of stakeholders) before any wholesale changes are considered. Similarly, Energex and Ergon suggested that the need and scope for changing the building block approach will not be known until the existing chapter 6 (of the NER) provisions have been applied to all distribution service providers. Energex also noted that current and pending reforms in the energy sector should also be completed prior to consideration of any changes. These views were supported by ETSA-Citipower-Powercor.



Integral also stated that given the implications of this Review, it is important that all parties have significant time and opportunity to understand the issues and be fully engaged in the review process. Integral proposed that the Review be conducted in two phases which would allow more consultation and engagement with stakeholders on the higher policy issues, including whether there are sufficient problems with the current arrangements that could be addressed by TFP, before proceeding to focus on the more detailed design issues.

EA stated that the absence of a specific TFP model made it difficult to provide meaningful responses to some of the issues. ENA also expressed concerns that the process to date has not provided enough detail of a proposed TFP model and methodology to allow participants to comment on its appropriateness. EA recommended that a 'straw man' TFP model be defined (possibly through an industry working group) for consultation. ENA stated that it is essential that sufficient time is allocated for the careful design of the model.

SP AusNet made a similar point. It expressed support for the AEMC's scope and approach and recommended that the next step be the development of an ideal 'straw man' TFP model so that stakeholders may comprehensively respond to a potential model for application.

The use of technical working groups to develop detailed alternative approaches to the building block approach was also suggested by Jemena.

In addition to consultation on a straw man model, both EA and ENA considered that a practical review and trial application of a TFP method would be beneficial. This would give service providers a better opportunity to form an opinion on whether TFP would promote the national objectives.

#### *Alternatives to TFP*

A number of submissions suggested that the AEMC's review include consideration of alternatives to TFP in addressing the identified deficiencies of the building block approach. The EUAA suggested at the public forum that greater use of comparative methodologies, including TFP, be adopted by regulators in the decision making processes.

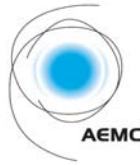
On the basis that there is much uncertainty surrounding TFP, including whether it is the best alternative to the building block approach, Jemena suggested that the AEMC consider a glide path approach to setting the price/revenue path of a service provider. That is, for the price path to glide from the current price to the price at the end of the period that would give the service provider the required rate of return.

Jemena argued that this model would be simple and inexpensive to operate and would be consistent with the fundamental objectives of incentive regulation. There would be no need for off ramps or efficiency carry over mechanism but it would retain 'firm specificity'.

## **2. Assessment against the national objectives**

### **Overview:**

Interested parties expressed concern that a TFP method to setting revenues/prices would not ensure that efficient costs and appropriate returns would be recovered. More particularly, a number of parties expressed concern about the treatment of increased future capital expenditures and increased costs from a changing regulatory environment.



Interested parties also commented that greater specification of a TFP methodology would assist in their consideration of whether the introduction of TFP would be beneficial to the economic regulation of service providers.

A number of parties also discussed incentives and incentive mechanisms. Opinions differed on the strength of incentives under the current framework and a potential TFP framework. VDPI, ESC and SP AusNet all suggested that a TFP methodology would improve incentives for service providers. The AER suggested that the AEMC consider the longer term implications of increasing the power of incentives for regulated service providers.

### **Submission highlights:**

On its initial consideration, EA is not persuaded that a TFP based method would allow recovery of efficient costs and earn a commensurate return. It noted the dangers of using historical data as this may not reflect future growth, giving rise to the risk that efficient costs would not be captured by the TFP allowance. ENA also doubted whether a model based upon historic data would be able to accommodate emerging government policies with respect to climate change.

According to ETSA-Citipower-Powercor, since that a TFP methodology does not have regard to a service provider's costs or future prospects it increases the risks for service providers. It was suggested that the AEMC should have regard to such risks if it is to develop a TFP methodology. In particular, Jemena expressed doubt that a TFP approach was suitable where forecast capital expenditure was expected to be lumpy.

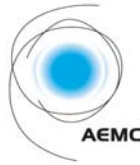
In Envestra's opinion, the building block approach provides sufficient incentives for service providers. It questioned whether there is actually a deficiency with the building block approach with regard to incentives, especially when it is combined with an efficiency carryover mechanism. Grid Australia also stated that it regarded the current regulatory approach as providing strong and appropriate incentives for the electricity transmission sector.

Integral stated that there is no conceptual reason to believe that a service provider would have greater incentive to achieve efficiency improvements using one method compared to another. It suggested that extending the efficiency benefit sharing scheme (EBSS) period may deliver the same benefits of having longer regulatory periods under a TFP model. Integral also suggested that a TFP model needs to include an EBSS, as well as the other existing incentives schemes, to ensure that the TFP does not produce fewer incentives than the current arrangements.

The AER also commented on incentive regulation. It noted that the strength of incentives under a regulatory regime depend on whether the cost-price link is broken. That is, the term of the regulatory period and the extent that past performance is used to establish future revenues. However, while a TFP methodology may be used to increase incentives (if it addressed the two key features noted) the AER noted that greater incentives may not be efficient or desirable for energy service providers. It suggested that exposure to greater risks may distort the activities of service providers in an undesirable way. Accordingly, the AEMC should consider whether there is a need to significantly increase the power of incentives for service providers.

In contrast to the submissions noted above, SP AusNet expressed support for TFP methodology. It noted concerns relating to how TFP could deal with the expected step changes in capital expenditure caused by the roll out of the smart meter infrastructure. However, it considered that a TFP regime could be designed to give service providers regulatory certainty.

In addition, SP AusNet stated that a TFP regime is an option worthy of consideration and could provide a superior alternative to building blocks. However, it does not support forms of TFP which are based upon a building block approach as these don't provide a true alternative to the current



approach. In SP AusNet's opinion, a true TFP alternative is where an initial price level ( $P_0$ ) is set and prices are adjusted thereafter in accordance with the TFP growth factor. In addition, such an approach would not specify any regulatory periods. Instead, the mechanism for re-aligning prices back to actual costs would be through the trigger of 'off-ramps' designed to protect users and service providers against undesirable exogenous events or market trends. SP AusNet opined that the key component of the incentive properties of the TFP regime is in the ability to have long or indefinite regulatory periods, placing the efficiency sharing mechanism clearly in the X factor. In its view, this creates greater certainty for service providers on their long term prices and will facilitate innovation and research and development beyond what is currently undertaken.

However, in regard to the term of regulatory periods, Envestra noted that in practice (in overseas jurisdictions) TFP regulatory periods have often been less than five years. Envestra stated that it was only aware of one instance of a period greater than five years.

As with SP AusNet, and in contrast to the majority of submissions, the VDPI stated that a TFP methodology to determining revenues and prices would improve efficiencies for service providers. In turn, this would provide benefits to end users of energy. The ESC provided extensive comments on the benefits from a TFP methodology. These include improving the incentives for service providers to operate efficiently and providing service providers with the ability to adapt to future developments in the energy sector. It also stated that the current regulatory approach does not successfully manage changes to corporate structures. Nor does it encourage service providers to meet demand management issues or challenges arising from climate change in a creative manner.

### **3. Costs and benefits of TFP compared to building blocks**

#### **Overview:**

The VDPI and ESC have claimed that use of a TFP methodology would be less costly than the current building block approach. However, other interested parties do not agree, noting in particular that periodic building block style 'price resets' and additional regulatory reporting requirements would be costly.

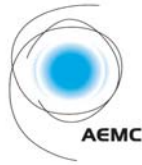
#### **Submission highlights:**

According to the AER, in conducting its cost-benefit analysis, the AEMC should have particular regard to the long term interests of end users of energy with respect to quality, safety, reliability and security of supply.

The VDPI stated that the use of TFP has the potential to limit the adversarial aspects of revenue determinations and consequently, reduce the costs of regulation. Similarly, the ESC opined that the use of a TFP methodology could lead to substantial savings for both service providers and regulator. In its opinion, and based on its own experience, the ESC claimed that the cost of implementing a TFP methodology would be modest. It stated that regulation under the building block framework had been costly and contentious.

However, other interested parties doubted whether TFP would lead to lower regulatory costs. In general, it was noted that having two forms of control would add to the costs for regulators and service providers. ENA stated that it was not convinced of the merits of running two models and that the co-existence of two regulatory regimes would have the effect of increasing the regulatory burden on industry and the regulator.

Comments were also made in regard to the data collection needed under TFP. In particular, EA stated that a TFP method requires a robust and consistent national dataset and noted that



significant costs would be incurred to establish and maintain such a dataset. Jemena agreed that additional regulatory reporting requirements will be a cost to service providers. According to the ENA, service providers are also concerned that the data requirements would be imposed on the entire sector rather than just on members that may opt for the TFP regime. This concern was reiterated by Energex and Ergon. These service providers stated their opposition for the requirement that all businesses provide information for a 'national database' of TFP relevant information.

It was also noted by Integral that a building block approach has been suggested for cost price resets. Accordingly, it was unclear to Integral that there would be any reduction in resources required for regulation. Integral also considered that it would be unlikely that annual reporting requirements could be relied upon to provide sufficient information to conduct a proper economic profit assessment.

Jemena identified a number of features about the TFP approach that it considered to be costs. These included the continued requirement to calculate WACC and 'price resets'. Jemena stated that a TFP approach that still used building blocks will retain many of the features of the building block approach and will not be a true alternative to the current methodology. It also noted that, in its view, the application of TFP also requires subjective judgements like building blocks.

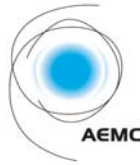
Envestra also commented that when combined with the building block approach to 'reset' prices periodically, a TFP approach will not lead to materially lower regulatory costs. Any cost savings that may have arisen from TFP will be eroded by the  $P_0$  process. Envestra noted that in contrast price monitoring does not require the setting of prices by a regulator and would achieve material cost savings.

In addition, Jemena stated that it did not accept the suggestion that the use of TFP would reduce the likelihood of disputes. EA also questioned whether a TFP method would lead to lower disputes as this would depend upon the development of a generally accepted methodology. Without an appropriate dataset, EA stated that any application of TFP will lead to disputes about the results of TFP calculations and therefore likely to undermine confidence in the regulatory framework as well as its integrity.

Envestra noted that in its experience, there has been significant debate on TFP related matters within a regulatory process. In its view, the debate was highly technical and not related to the usual matters of a service provider's business.

A number of parties agreed that a more detailed specification of the TFP approach would help clarify the relative advantages of TFP.

The Total Environment Centre (TEC) submission looked at the merits of a TFP model for promoting demand management. It concluded that a TFP approach has the potential to be neutral in relation to demand management, but as it requires the use of a price cap approach (which incentivises greater demand and consumption) it also encourages consumption and demand. TEC also noted that a TFP model has a number of other disadvantages that need to be assessed in light of the overall goals of encouraging demand management. In particular, it is not a tool which provides transparency and therefore might not provide the necessary transparency required to encourage demand management options (and energy efficiency).



## 4. Necessary conditions for TFP

### Overview:

A number of service providers stated that the necessary conditions for TFP did not presently exist in the Australian energy market. This included relevant data, sufficient comparable firms and a steady state.

Some interested parties did not agree with the suggestion that overseas data or normalisation could be used in a TFP process. It was noted that it may result in a less transparent process.

### Submission highlights:

EA does not consider that the pre-conditions of a steady state and the existence of accurate and consistent data do not exist in the Australian regulatory environment, especially in the NSW electricity sector. Energex and Ergon were of a similar opinion. Envestra also stated that it does not consider that appropriate data exist for TFP. In contrast, SP AusNet stated that in its view, the gas and electricity distribution sector fit the required conditions well. It noted that these sectors have been relatively stable and investment has been consistent.

The ESC stated that the most suitable definition of an industry group would be all regulated service providers within the relevant sector. It suggests that there is no need to divide service providers into smaller comparable groups and, in fact, this would be arbitrary and difficult. ESC does not consider that there is any evidence to support the view that different operating conditions of service providers have a substantial impact on their TFP growth rate.

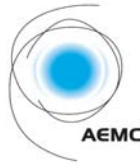
However, EA considered that it would be difficult to select comparable businesses to form an industry benchmark against which business are penalised/rewarded for relative performance. EA, Energex and Ergon all noted that there are inherent differences in the characteristics of each service provider that makes it difficult, if not impossible, to select a group of comparable service providers. In EA's view, possible solutions to defining the correct industry give rise to other problems which cast doubts on the appropriateness and effectiveness of a TFP based approach. ENA also considered that finding comparator firms would be difficult for a number of reasons including geographical conditions, customer bases, operating conditions and accounting practices.

SP AusNet noted that it may be necessary to address differences between businesses relating to relative efficiency levels or the business' ability to respond to incentives but considered that this could be dealt with through an agreed method. It suggested that a TFP model will need an effective means of treating data from "outlier" or atypical businesses. While Envestra also acknowledged that there are numerous issues arising from comparing service providers, it considered that adjusting data lessens the transparency of a TFP approach.

EA submitted any adjustments to audited data or supplementing the data set with overseas data is inappropriate. ETSA-Citipower-Powercor also expressed this view. In addition, EA considered that it would not be appropriate for the AER to use confidential information for any other purposes than that originally intended by the provision of the confidential information. The AER acknowledged that overseas data may assist in TFP benchmarking, particularly where there is a lack of Australian comparators. This would depend in part of the definition of industry groups for TFP purposes.

The AER suggested that having data for at least two regulatory periods will assist in the implementation of TFP (whether for benchmarking of revenue/price determinations). It noted that it will have regard to the policy development of TFP in its development of a national approach to using information gathering instruments and protocols under the current legislation.





In relation to a steady state, EA stated that it does not consider the NSW electricity sector is in a mature steady state. It noted that it is entering a period of significant capital replacement and therefore is not confident that the X factor set by using a TFP historical growth rate will result in the recovery of efficient costs. It noted that the other NSW electricity distribution service providers were also anticipating increased capital expenditure programs in the future. Similar comments were also made by Energex and Ergon.

Many service providers commented on the challenges facing the energy sector caused by the emerging Government policies relating to climate change. Some also noted the development of electricity 'smart meters'. These expected developments suggest, according to some submissions, that the industry is not in a steady state.

## 5. TFP design issues

### Overview:

While it was noted that outputs and inputs would need to be well defined, a number of submissions suggested that achieving relevant measures may be difficult.

Submissions agreed that the current provisions on the term of the regulatory period should be retained. A number of submissions agreed that cost pass through events and other re-openers should be available under a TFP methodology.

Submissions stressed the importance that the discretion to adopt a TFP approach should be with the service provider.

### Submission highlights:

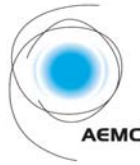
#### *Outputs and inputs*

A number of submissions, such as ETSA-Citipower-Powercor, acknowledged that outputs and inputs would need to be well defined. It was also noted (see, for example, Energex and Ergon) that different service providers measured and collated different information on outputs and inputs. There was particular concern expressed about measuring capital.

In addition, Ergon doubted that TFP would be a valid productivity measure if it included energy as an output measure (and no 'capacity' measure).

EA considered that there is an inherent difficulty in incorporating qualitative output measures, such as reliability and system security, in TFP. It raised concerns that the output measures used for TFP indices would not adequately reflect the nature and licence obligations on service providers. For example, it is not clear how simple line length measures take account of higher cost characteristics such as undergrounding assets. Accordingly, EA suggested that a TFP based approach could produce a perverse outcome – expenditure that leads to increases in input without any compensating effect in outputs. EA stressed that it is important that service providers receive adequate revenue to allow mandated requirements to be met.

Other businesses made the same point. ENA noted that the problem has been raised in New Zealand where the regime acts to penalise investment to improve quality and discourages discretionary investment. Integral raised concerns that it is not clear that TFP can adequately capture and support the existence of binding design planning criteria. Nor can it support business objectives of achieving adequate security and reliability of supply. Integral stated that there are significant problems with trying to incorporate mandated standards into a TFP approach and noted



that there are different definitions applied to setting network security and reliability policies across the jurisdictions.

Grid Australia considered that the task of specifying inputs and outputs for electricity transmission is likely to be controversial because of the differences in the terms of asset base value, average asset ages and the wide variation in the physical characteristics of the networks.

The ESC has suggested that while there are some measurement issues that must be resolved, they are not numerous and can be resolved for the purposes of regulating network prices.

### *Regulatory period*

EA considered that any application of TFP must maintain the minimum 5 year period. ETSA-Citipower-Powercor noted that the actual term should be at the discretion of the service provider. Submissions were generally in agreement that a minimum five year regulatory period should continue to be available to service providers, consistent with the current provisions of the NER and NGR.

EA also suggested that off ramps also be available under a TFP methodology. This would allow the management of events that have a significant impact on the prices/revenues of the service provider. SP AusNet noted that any perceived risk associated with fluctuating returns could be mitigated by determinations by the regulator on what level of returns it would consider acceptable when designing off ramp trigger.

Cost pass through mechanisms and earnings based re-openers were generally agreed as desirable features within a TFP framework.

### *Adopting TFP*

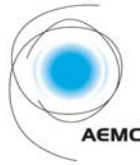
There was agreement among interested parties that the option of using a TFP approach to determine revenues or prices must be with the service provider. That is, an 'opt in' approach. This included the decision to revert to building blocks after use of TFP. A number of service providers suggested that only these interested parties should be required to provide TFP information to the AER. There was concern that even if they did not elect to use TFP, service providers would be required to provide information to the AER for TFP purposes.

### *Setting the initial price*

EA recognised that the methodology to set  $P_0$  is likely to be based upon some hybrid building block approach but questioned whether there would be an ex-post assessment of a business' expenditure in determining the initial prices/revenues. It asserted that the proposal to continue using a building block approach suggests that it is the more accurate method to determine revenues and prices.

EA also stated that firm specific adjustments to the industry TFP growth rate must be allowed to ensure that a service provider is able to recover its efficient costs and earn a commensurate return.

ETSA-Citipower-Powercor identified the key elements of: deriving the TFP growth factor, making adjustments to X and 'rebasing' prices. It was stated that these aspects needed to be well defined to manage the additional risk that a TFP approach places on service providers.



## 6. TFP for the transmission sector

### Overview:

A few interested parties expressed a clear opinion that the transmission sector should not be subject to a TFP approach to regulation.

### Submission highlights:

SP AusNet noted that while it considered the electricity and gas distribution sectors to be in steady states suitable for the application of a TFP methodology, it did not regard the transmission sectors as being in that state. In its view, TFP would be less suited to the transmission sector.

Similarly, APIA's forum presentation asserts that any introduction of TFP should not extend to the transmission pipeline sector. This is because of the lumpy nature of capital expenditure for transmission pipelines and that there are significant differences between pipelines.

Grid Australia considered that the application of TFP based regulation to electricity transmission would be contrary to the NEO. It expressed agreement with the AEMC Issues Paper that the characteristics of transmission networks are fundamentally different to distribution networks. For these reasons, Grid Australia considers that applying a TFP based method to electricity transmission would deliver inappropriate outcomes in terms of revenue, profits and investment and would create regulatory uncertainty for transmission service providers. It also suggested that there would be considerable difficulties in establishing relevant data for TFP purposes.

The Grid Australia submission presents a table showing the average revenue and price increases for each electricity transmission service provider as determined by the AER in its most recent decisions. It indicates that there is significant variability in average revenue and price increases across the service providers. Grid Australia has asserted that this variability is a reflection of the service providers' different characteristics and demand forecasts. Accordingly, applying a single "industry wide" X factor across all transmission service providers would be inappropriate. That is, significant problems would arise from applying a 'one size fits all' approach to these service providers.

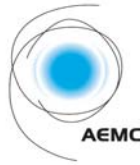
Grid Australia also noted that the rationale for a revenue cap form of control – principally the lumpy nature of investment and the high proportion of fixed costs – is contrary to the ongoing productivity trends and steady state conditions which are conducive to TFP based regulation.

SP AusNet also considers that a TFP approach would be less suited to the transmission sector, particularly as the investment profile of transmission is lumpy and uncertain. Prices and revenues in these circumstances are more appropriately tied to firm-specific costs which may vary significantly from year to year.

In contrast, ESC has stated that TFP can be applied to the transmission sector although the relative benefits of TFP (over the building block approach) would be less pronounced than in the distribution sector.

## 7. TFP as a benchmarking technique

EA cautioned against mandating the use of TFP as a benchmarking tool. It stated that it would be inappropriate to apply TFP indices to building blocks until an appropriate set of indices has been developed and has been shown to work. It noted that there is flexibility within the NER for the AER to apply any benchmarking technique and that this should be maintained.



However, the EUAA stated that energy users wanted to see a greater use of comparative benchmarking methodologies by regulators. In its view, the building block methodology has failed to work successfully and the use of a variety of benchmarking tools would assist the regulator in its decision making processes.

The AER commented that 'there is likely to be merit in adopting the use of TFP as a 'benchmarking tool' under the current building blocks method'. It suggested that a benchmarking approach could be the first step in the development of TFP as a revenue or price setting method. The AER identified benefits from this approach. These included: enhancement of the information on service providers available to the AER, provide an opportunity to establish a systematic data collection process, and provide information relevant for a more informed policy discussion on TFP.

The public forum presentation from the Energy Users Association of Australia (EUAA) expressed support for greater use of benchmarking and comparative approaches to aid in the AER's assessment of revenue and pricing proposals from service providers.

An application of TFP to assess the performance of service providers has been carried out by Dr Watts. His study was on the performance of Queensland electricity distribution businesses for the period 1977-78 to 1991-92.

## **8. Implementation and transitional issues**

EA considered that it is not appropriate for important detailed design of the new regulatory approach be given to the AER to develop through guidelines. It suggested that instead the development of details of a TFP approach should involve significant industry consultation. Other service providers also expressed support for greater consultation in the AEMC's TFP Review process.

The VDPI suggested that a TFP methodology be implemented in an 'evolutionary and flexible' manner. The ESC agreed that this is an appropriate approach to the development of TFP in Australia.

The AER suggested that TFP could be used initially as a benchmarking tool before further consideration of using it to determine revenues and prices.